

AARTN ASSOCIATES

The Modern Construction Solutions



#1059, MIG-A Sector, Opp. Railwheel Factory,
Yelahanka New Town, Bangalore - 64

Ph : 8048505503 | Email : aartnassociates@gmail.com

Test Report of Cement Concrete Cubes

IS: 516-1959 (Method of tests for strength of Concrete C1.5)

Date: 25-11-2021

Name of Work : Improvements to roads and drian at western side of hegdenagara 2nd main road from 1st cross to 7th cross and surrounding Areas in ward No.06

Client Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.

Contractor Sri. K S Chowdareddy

Customer Reference EE(PROJECT)/YNK ZONE/WO/191/2019-20

Source of Sample Sample supplied by Agency

Sample Condition Satisfactory

Date of Reciept 28-10-2021

Sample Type C.C Road Top Layer

Sample Type/Size 150x150x150 mm

Sample Grade/ Age M30/ 28 Days Compressive Strength

Date of Test 25-11-2021

Location

SI No.	Identification Mark	Grade of Concrete	Date of Casting	Date of Testing	Dimension of Specification	Cross sectional area	Weight of the sample	Failure Load	Compre ssive Strength	Average Compressive Strength
					mm	Sq.mm	kg	KN	N/mm ²	N/mm ²
1	C.C Road	M30	28-10-2021	25-11-2021	150x150x150	22500	8.40	699	30.5	30.87
2	C.C Road	M30	28-10-2021	25-11-2021	150x150x150	22500	8.55	689	30.6	
3	C.C Road	M30	28-10-2021	25-11-2021	150x150x150	22500	8.61	708	31.5	

Remarks :

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92



AARTN ASSOCIATES

The Modern Construction Solutions



#1059, MIG-A Sector, Opp. Railwheel Factory,
Yelahanka New Town, Bangalore - 64

Ph : 8048505503 | Email : aartnassociates@gmail.com
Test Report of Cement Concrete Cubes

IS: 516-1959 (Method of tests for strength of Concrete C1.5)

Date: 25-11-2021

Name of Work : Improvements to roads and drian at western side of hegdenagara 2nd main road from
1st cross to 7th cross and surrounding Areas in ward No.06

Client Bruhat Bengaluru Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.

Contractor Sri. K S Chowdareddy

Customer Reference EE(PROJECT)/YNK ZONE/WO/191/2019-20

Source of Sample Sample supplied by Agency

Sample Condition Satisfactory

Date of Reciept 28-10-2021

Sample Type C.C Road Top Layer

Sample Type/Size 150x150x150 mm

Sample Grade/ Age M30/ 28 Days Compressive Strength

Date of Test 25-11-2021

Location

SI No.	Identification Mark	Grade of Concrete	Date of Casting	Date of Testing	Dimension of Specification	Cross sectional area	Weight of the sample	Failure Load	Compre ssive Strength	Average Compressive Strength
					mm	Sq.mm	kg	KN	N/mm ²	N/mm ²
1	C.C Road	M30	28-10-2021	25-11-2021	150x150x150	22500	8.72	682	30.3	30.67
2	C.C Road	M30	28-10-2021	25-11-2021	150x150x150	22500	8.87	695	31.2	
3	C.C Road	M30	28-10-2021	25-11-2021	150x150x150	22500	8.62	686	30.5	

Remarks :

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92



AARTN ASSOCIATES

The Modern Construction Solutions



#1059, MIG-A Sector, Opp. Railwheel Factory,
Yelahanka New Town, Bangalore - 64
Ph : 8048505503 | Email : aartnassociates@gmail.com

Test Report of Cement Concrete Cubes

IS: 516-1959 (Method of tests for strength of Concrete C1.5)

Date: 25-11-2021

Name of Work : Improvements to roads and drian at western side of hegdenagara 2nd main road from 1st cross to 7th cross and surrounding Areas in ward No.06

Client Bruhat Bangalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.

Contractor Sri. K S Chowdareddy

Customer Reference EE(PROJECT)/YNK ZONE/VO/191/2019-20

Source of Sample Sample supplied by Agency

Sample Condition Satisfactory

Date of Reciept 28-10-2021

Sample Type C.C Road Top Layer

Sample Type/Size 150x150x150 mm

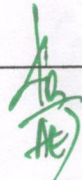
Sample Grade/ Age M30/ 28 Days Compressive Strength

Date of Test 25-11-2021

Location

SI No.	Identification Mark	Grade of Concrete	Date of Casting	Date of Testing	Dimension of Specification	Cross sectional area	Weight of the sample	Failure Load	Compre ssive Strength	Average Compressive Strength
					mm	Sq.mm	kg	KN	N/mm ²	N/mm ²
1	C.C Road	M30	28-10-2021	25-11-2021	150x150x150	22500	8.35	695	30.9	31.04
2	C.C Road	M30	28-10-2021	25-11-2021	150x150x150	22500	8.50	705	31.2	
3	C.C Road	M30	28-10-2021	25-11-2021	150x150x150	22500	8.56	698	31.0	

Remarks :


Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92



AARTN ASSOCIATES

The Modern Construction Solutions



#1059, MIG-A Sector, Opp. Railwheel Factory,
Yelahanka New Town, Bangalore - 64
Ph : 8048505503 | Email : aartnassociates@gmail.com

Test Report of Cement Concrete Cubes

IS: 516-1959 (Method of tests for strength of Concrete C1.5)

Date: 05-11-2021

Name of Work : Improvements to roads and drian at western side of hegdenagara 2nd main road from 1st cross to 7th cross and surrounding Areas in ward No.06

Client Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.

Contractor Sri. K S Chowdareddy

Customer Reference EE(PROJECT)/YNK ZONE/VO/191/2019-20

Source of Sample Sample supplied by Agency

Sample Condition Satisfactory

Date of Reciept 28-10-2021

Sample Type C.C Road Top Layer

Sample Type/Size 150x150x150 mm

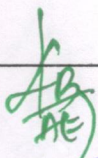
Sample Grade/ Age M30/ 28 Days Compressive Strength

Date of Test 05-11-2021

Location

SI No.	Identification Mark	Grade of Concrete	Date of Casting	Date of Testing	Dimension of Specification	Cross sectional area	Weight of the sample	Failure Load	Compre ssive Strength	Average Compressive Strength
					mm	Sq.mm	kg	KN	N/mm ²	N/mm ²
1	C.C Road	M30	28-10-2021	05-11-2021	150x150x150	22500	8.90	695	30.9	31.05
2	C.C Road	M30	28-10-2021	05-11-2021	150x150x150	22500	9.05	705	31.5	
3	C.C Road	M30	28-10-2021	05-11-2021	150x150x150	22500	8.69	692	30.8	

Remarks :


Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92



AARTN ASSOCIATES

The Modern Construction Solutions

#1059, MIG-A Sector, Opp. Railwheel Factory,
Yelahanka New Town, Bangalore - 64

Ph : 8048505503 | Email : aartnassociates@gmail.com



Test Report of Cement Concrete Cubes

IS: 516-1959 (Method of tests for strength of Concrete C1.5)

Date: 25-11-2021

Name of Work : Improvements to roads and drian at western side of hegdenagara 2nd main road from 1st cross to 7th cross and surrounding Areas in ward No.06

Client Bruhat Bangalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.

Contractor Sri. K S Chowdareddy

Customer Reference EE(PROJECT)/YNK ZONE/WO/191/2019-20

Source of Sample Sample supplied by Agency

Sample Condition Satisfactory

Date of Reciept 28-10-2021

Sample Type C.C Road Top Layer

Sample Type/Size 150x150x150 mm

Sample Grade/ Age M30/ 28 Days Compressive Strength

Date of Test 25-11-2021

Location

Sl No.	Identification Mark	Grade of Concrete	Date of Casting	Date of Testing	Dimension of Specification	Cross sectional area	Weight of the sample	Failure Load	Compre ssive Strength	Average Compressive Strength
					mm	Sq.mm	kg	KN	N/mm ²	N/mm ²
1	C.C Road	M30	28-10-2021	25-11-2021	150x150x150	22500	8.74	690	30.9	30.85
2	C.C Road	M30	28-10-2021	25-11-2021	150x150x150	22500	8.89	700	31.1	
3	C.C Road	M30	28-10-2021	25-11-2021	150x150x150	22500	8.95	687	30.5	

Remarks :

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92



AARTN ASSOCIATES

The Modern Construction Solutions



#1059, MIG-A Sector, Opp. Railwheel Factory,
Yelahanka New Town, Bangalore - 64
Ph : 8048505503 | Email : aartnassociates@gmail.com

Test Report of Aggregate Impact Value

IS: 2386 Part-IV

Date: 04-10-2021

Name of Work : Improvements to roads and drian at western side of hegdenagara 2nd main road from 1st cross to 7th cross and surrounding Areas in ward No.06

Client Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.

Contractor Sri. K S Chowdareddy

Customer Reference EE(PROJECT)/YNK ZONE/WO/191/2019-20

Source of Sample Sample supplied by Agency

Sample Condition Satisfactory

Sample Type Coarse Aggregate for GSB (Granular Sub Base)

Date of Test 04-10-2021

Sl. No	Particulars of Observations	Index	Test-1	Test-2
1	Total weight of the surface dry sample (passing 12.5mm and retained on 10mm sieve)	A	300.1	300.5
2	Weight of fraction passing 2.36 mm sieve after giving 15 blows	B	73.9	74
3	Weight of fraction passing 2.36 mm sieve after giving 15 blows	C	225.9	225.9
4	Total weight of (B+C) is less than the initial weight (Weight A) by more than one gram the result shall be discarded and a fresh test made	A-(B+C)	0.3	0.6
5	Aggregate impact value	(B/A)x100	24.63	24.63
6	Aggregate impact value (Mean of two tests)	Percentage	24.63	

Remarks :



Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

AARTN ASSOCIATES

The Modern Construction Solutions



#1059, MIG-A Sector, Opp. Railwheel Factory,
Yelahanka New Town, Bangalore - 64
Ph : 8048505503 | Email : aartnassociates@gmail.com

Test Results of Gradation for GSB (Granular Sub Base)

MORT&H (Section 400, Table 400-1)

Date: 04-10-2021

Name of Work : Improvements to roads and drian at western side of hegdenagara 2nd main road from 1st cross to 7th cross and surrounding Areas in ward No.06

Client Bruhat Bengalore Mahanagara Palike (BBMP) ,Yelahanka Zone,Bengaluru.

Contractor Sri. K S Chowdareddy

Customer Reference EE(PROJECT)/YNK ZONE/VO/191/2019-20

Source of Sample Sample supplied by Agency

Sample Condition Satisfactory

Type of Mix Coarse Aggregate for GSB (Granular Sub Base)-Grading V

Date of Test 04-10-2021

Total wt of the sample (gms):

11000

IS Sieve size (mm)	Weight retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specifcations as per MORTH (Table 400-1)	Remarks
75	0	0	0.0	100	100	Satisfactory
53	315	315	2.9	97.1	80-100	Satisfactory
26.5	2259	2574	23.4	76.6	55-90	Satisfactory
9.5	2179	4753	43.2	56.8	35-65	Satisfactory
4.75	2251	7004	63.7	36.3	25-50	Satisfactory
2.36	1820	8824	80.2	19.8	10-20	Satisfactory
0.85	1212	10036	91.2	8.8	2-10	Satisfactory
0.425	911	10947	99.5	0.5	0-5	Satisfactory

Remarks: Satisfactory



Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 02

Test Results of Gradation for GSB (Granular Sub Base)

IS: 2386 Part-8 & 29	Date: 04-10-2021
----------------------	------------------

Name of Work : Improvements to roads and drian at western side of hegdenagara 2nd main road from 1st cross to 7th cross and surrounding Areas in ward No.06

Client	Bruhat Bengalore Mahanagara Palike (BBMP) ,Yelahanka Zone,Bengaluru.
Contractor	Sri. K S Chowdareddy
Customer Reference	EE(PROJECT)/YNK ZONE/VO/191/2019-20
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Type of Mix	Coarse Aggregate for <u>GSB (Granular Sub Base)</u>
Date of Test	04-10-2021

Location

Description of materials:	GSB-V		
MDD (gm/cc) =	2.180	OMC(%) =	5.20
Bulk Density of sand:	1.395	Sand retained in cone (gm)=	395.4

FIELD DENSITY BY SAND REPLACEMENT METHOD

SL.no	Particulars	S-1	S-2
1	Wt of soil from hole (w2) gm:	2420.2	2402.6
2	Wt of sand + cylinder before pouring(gm) (w3)	7180	7180
3	Wt of sand+ cylinder after pouring (gm)(w4)	5285.2	5299.6
4	Wt of sand in hole (gm)(w5= w3-w4-w1)	1499.4	1485
5	Volume of sand in hole (V = W5/Ysand)	1074.84	1064.52
6	Bulk density (gm/cc) (Yb= W2/v)	2.252	2.257
7	Moisture meter reading (%)	5.50	5.40
8	Dry density (g/cc) Yd = Yb /(1 + w/100)	2.155	2.150
9	Degree of compaction achieved, (%) (Yd/mdd)*100)	98.84	98.60
10	Required degree of compaction, (%) ,As per MORT&H 5th specification.	98.72	

Remarks: Found to be Satisfactory.

(Signature)

(Signature)

Asst. Executive Engineer
Project Division





#1059, MIG-A Sector, Opp. Railwheel Factory,
Yelahanka New Town, Bangalore - 64
Ph : 8048505503 | Email : aartnassociates@gmail.com

Test Results of Gradation for GSB (Granular Sub Base)

IS: 2386 Part-8 &29		Date: 04-10-2021	
Name of Work : Improvements to roads and drian at western side of hegdenagara 2nd main road from 1st cross to 7th cross and surrounding Areas in ward No.06			
Client	Bruhat Bengalore Mahanagara Palike (BBMP) ,Yelahanka Zone,Bengaluru.		
Contractor	Sri. K S Chowdareddy		
Customer Reference	EE(PROJECT)/YNK ZONE/WO/191/2019-20		
Source of Sample	Sample supplied by Agency		
Sample Condition	Satisfactory		
Type of Mix	Coarse Aggregate for GSB (Granular Sub Base)		
Date of Test	04-10-2021		
Location			
Description of materials:	GSB-V		
MDD (gm/cc) =	2.180	OMC(%) =	5.20
Bulk Density of sand:	1.395	Sand retained in cone (gm)=	395.4
FIELD DENSITY BY SAND REPLACEMENT METHOD			
SL.no	Particulars	S-1	S-2
1	Wt of soil from hole (w2) gm:	2420.2	2402.6
2	Wt of sand + cylinder before pouring(gm) (w3)	7180	7180
3	Wt of sand+ cylinder after pouring (gm)(w4)	5285.2	5299.6
4	Wt of sand in hole (gm)(w5= w3-w4-w1)	1499.4	1485
5	Volume of sand in hole (V = W5/Ysand)	1074.84	1064.52
6	Bulk density (gm/cc) (Yb= W2/v)	2.252	2.257
7	Moisture meter reading (%)	5.50	5.40
8	Dry density (g/cc) Yd = Yb /(1 + w/100)	2.155	2.150
9	Degree of compaction achieved, (%) (Yd/mdd)*100)	98.84	98.60
10	Required degree of compaction, (%) ,As per MORT&H 5th specification.	98.72	
Remarks: Found to be Satisfactory.			

AE

AE



Test Results of Gradation for GSB (Granular Sub Base)

IS: 2386 Part-8 &29

Date: 04*10-2021

Name of Work : Improvements to roads and drian at western side of hegdenagara 2nd main road from 1st cross to 7th cross and surrounding Areas in ward No.06

Client	Bruhat Bengalore Mahanagara Palike (BBMP) ,Yelahanka Zone,Bengaluru.
Contractor	Sri. K S Chowdareddy
Customer Reference	EE(PROJECT)/YNK ZONE/WO/191/2019-20
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Type of Mix	Coarse Aggregate for GSB (Granular Sub Base)
Date of Test	04-10-2021
Location	

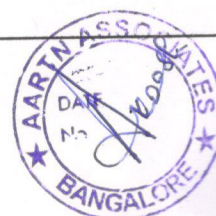
Description of materials:	GSB-V		
MDD (gm/cc) =	2.180	OMC(%) =	5.20
Bulk Density of sand:	1.395	Sand retained in cone (gm)=	395.4

FIELD DENSITY BY SAND REPLACEMENT METHOD

SL.no	Particulars	S-1	S-2
1	Wt of soil from hole (w2) gm:	2405.3	2407.2
2	Wt of sand + cylinder before pouring(gm) (w3)	7180	7180
3	Wt of sand+ cylinder after pouring (gm)(w4)	5283.7	5301.5
4	Wt of sand in hole (gm)(w5= w3-w4-w1)	1500.9	1483.1
5	Volume of sand in hole (V = W5/Ysand)	1075.91	1063.15
6	Bulk density (gm/cc) (Yb= W2/v)	2.236	2.264
7	Moisture meter reading (%)	5.20	5.35
8	Dry density (g/cc) Yd = Yb /(1 + w/100)	2.139	2.156
9	Degree of compaction achieved, (%) (Yd/mdd)*100)	98.13	98.92
10	Required degree of compaction, (%) ,As per MORT&H 5th specification.	98.53	

Remarks: Found to be Satisfactory.

Asst. Executive Engineer
Project Division
Yelahanka Zone



AARTN ASSOCIATES

The Modern Construction Solutions



#1059, MIG-A Sector, Opp. Railwheel Factory,
Yelahanka New Town, Bangalore - 64
Ph : 8048505503 | Email : aartnassociates@gmail.com

Test Report of Aggregate Impact Value

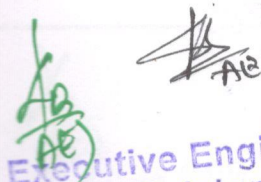
IS: 2386 Part-IV

Date: 11-10-2021

Name of Work : Improvements to roads and drian at western side of hegdenagara 2nd main road from 1st cross to 7th cross and surrounding Areas in ward No.06

Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Contractor	Sri. K S Chowdareddy
Customer Reference	EE(PROJECT)/YNK ZONE/WO/191/2019-20
Source of Sample	Sample supplied by Agency
Sample Condition	Satisfactory
Sample Type	Coarse Aggregate for GSB (Granular Sub Base)
Date of Test	11-10-2021

Sl. No	Particulars of Observations	Index	Test-1	Test-2
1	Total weight of the surface dry sample (passing 12.5mm and retained on 10mm sieve)	A	300.2	300.4
2	Weight of fraction passing 2.36 mm sieve after giving 15 blows	B	75.6	74.25
3	Weight of fraction passing 2.36 mm sieve after giving 15 blows	C	224.15	225.9
4	Total weight of (B+C) is less than the initial weight (Weight A) by more than one gram the result shall be discarded and a fresh test made	A-(B+C)	0.45	0.25
5	Aggregate impact value	(B/A)x100	25.18	24.72
6	Aggregate impact value (Mean of two tests)	Percentage	24.95	


Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92



AARTN ASSOCIATES

The Modern Construction Solutions



#1059, MIG-A Sector, Opp. Railwheel Factory,
Yelahanka New Town, Bangalore - 64
Ph : 8048505503 | Email : aartnassociates@gmail.com

Test Results of Gradation for GSB (Granular Sub Base)

MORT&H (Section 400, Table 400-1)

Date: 11-10-2021

Name of Work : Improvements to roads and drian at western side of hegdenagara 2nd main road from 1st cross to 7th cross and surrounding Areas in ward No.06

Client Bruhat Bengalre Mahanagara Palike (BBMP) ,Yelahanka Zone,Bengaluru.

Contractor Sri. K S Chowdareddy

Customer Reference EE(PROJECT)/YNK ZONE/WO/191/2019-20

Source of Sample Sample supplied by Agency

Sample Condition Satisfactory

Type of Mix Coarse Aggregate for GSB (Granular Sub Base)-Grading V

Date of Test 11-10-2021

Total wt of the sample (gms):

11000

IS Sieve size (mm)	Weight retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specifcations as per MORTH (Table 400-1)	Remarks
75	0	0	0.0	100	100	Satisfactory
53	315	315	2.9	97.1	80-100	Satisfactory
26.5	2259	2574	23.4	76.6	55-90	Satisfactory
9.5	2179	4753	43.2	56.8	35-65	Satisfactory
4.75	2251	7004	63.7	36.3	25-50	Satisfactory
2.36	1820	8824	80.2	19.8	10-20	Satisfactory
0.85	1212	10036	91.2	8.8	2-10	Satisfactory
0.425	911	10947	99.5	0.5	0-5	Satisfactory

Remarks: Satisfactory


AE

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92



AARTN ASSOCIATES

The Modern Construction Solutions



#1059, MIG-A Sector, Opp. Railwheel Factory,
Yelahanka New Town, Bangalore - 64
Ph : 8048505503 | Email : aartnassociates@gmail.com

Test Results of Gradation for GSB (Granular Sub Base)

IS: 2386 Part-8 &29		Date: 11-10-2021	
Name of Work : Improvements to roads and drian at western side of hegdenagara 2nd main road from 1st cross to 7th cross and surrounding Areas in ward No.06			
Client	Bruhat Bengalore Mahanagara Palike (BBMP) ,Yelahanka Zone,Bengaluru.		
Contractor	Sri. K S Chowdareddy		
Customer Reference	EE(PROJECT)/YNK ZONE/WO/191/2019-20		
Source of Sample	Sample supplied by Agency		
Sample Condition	Satisfactory		
Type of Mix	Coarse Aggregate for GSB (Granular Sub Base)		
Date of Test	11-10-2021		
Location			
Description of materials:	GSB-V		
MDD (gm/cc) =	2.180	OMC(%) =	5.20
Bulk Density of sand:	1.395	Sand retained in cone (gm)=	395.4
FIELD DENSITY BY SAND REPLACEMENT METHOD			
SL.no	Particulars	S-1	S-2
1	Wt of soil from hole (w2) gm:	2410.5	2404.6
2	Wt of sand + cylinder before pouring(gm) (w3)	7180	7180
3	Wt of sand+ cylinder after pouring (gm)(w4)	5285.4	5301.5
4	Wt of sand in hole (gm)(w5= w3-w4-w1)	1499.2	1483.1
5	Volume of sand in hole (V = W5/Ysand)	1074.695341	1063.15
6	Bulk density (gm/cc) (Yb= W2/v)	2.243	2.262
7	Moisture meter reading (%)	5.20	5.30
8	Dry density (g/cc) Yd = Yb /(1 + w/100)	2.146	2.154
9	Degree of compaction achieved, (%) (Yd/mdd)*100)	98.46	98.81
10	Required degree of compaction, (%) ,As per MORT&H 5th specification.	98.63	
Remarks: Found to be Satisfactory.			

AE

AE

Asst. Executive Engineer
Project Division
Yelahanka Zone





#1059, MIG-A Sector, Opp. Railwheel Factory,
Yelahanka New Town, Bangalore - 64
Ph : 8048505503 | Email : aartnassociates@gmail.com

Test Results of Gradation for GSB (Granular Sub Base)

IS: 2386 Part-8 &29		Date: 11-10-2021	
Name of Work : Improvements to roads and drian at western side of hegdenagara 2nd main road from 1st cross to 7th cross and surrounding Areas in ward No.06			
Client	Bruhat Bengalore Mahanagara Palike (BBMP) ,Yelahanka Zone,Bengaluru.		
Contractor	Sri. K S Chowdareddy		
Customer Reference	EE(PROJECT)/YNK ZONE/VO/191/2019-20		
Source of Sample	Sample supplied by Agency		
Sample Condition	Satisfactory		
Type of Mix	Coarse Aggregate for GSB (Granular Sub Base)		
Date of Test	11-10-2021		
Location			
Description of materials:	GSB-V		
MDD (gm/cc) =	2.180	OMC(%) =	5.20
Bulk Density of sand:	1.395	Sand retained in cone (gm)=	395.4
FIELD DENSITY BY SAND REPLACEMENT METHOD			
SL.no	Particulars	S-1	S-2
1	Wt of soil from hole (w2) gm:	2412.3	2400.5
2	Wt of sand + cylinder before pouring(gm) (w3)	7180	7180
3	Wt of sand+ cylinder after pouring (gm)(w4)	5289.6	5298.9
4	Wt of sand in hole (gm)(w5= w3-w4-w1)	1495	1485.7
5	Volume of sand in hole (V = W5/Ysand)	1071.684588	1065.02
6	Bulk density (gm/cc) (Yb= W2/v)	2.251	2.254
7	Moisture meter reading (%)	5.25	5.15
8	Dry density (g/cc) Yd = Yb /(1 + w/100)	2.154	2.147
9	Degree of compaction achieved, (%) (Yd/mdd)*100)	98.81	98.47
10	Required degree of compaction, (%) ,As per MORT&H 5th specification.	98.64	
Remarks: Found to be Satisfactory.			

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92





#1059, MIG-A Sector, Opp. Railwheel Factory,
Yelahanka New Town, Bangalore - 64
Ph : 8048505503 | Email : aartnassociates@gmail.com

Test Results of Gradation for GSB (Granular Sub Base)

IS: 2386 Part-8 &29		Date: 11-10-2021	
Name of Work : Improvements to roads and drian at western side of hegdenagara 2nd main road from 1st cross to 7th cross and surrounding Areas in ward No.06			
Client	Bruhat Bengalore Mahanagara Palike (BBMP) ,Yelahanka Zone,Bengaluru.		
Contractor	Sri. K S Chowdareddy		
Customer Reference	EE(PROJECT)/YNK ZONE/WO/191/2019-20		
Source of Sample	Sample supplied by Agency		
Sample Condition	Satisfactory		
Type of Mix	Coarse Aggregate for GSB (Granular Sub Base)		
Date of Test	11-10-2021		
Location			
Description of materials:	GSB-V		
MDD (gm/cc) =	2.180	OMC(%) =	5.20
Bulk Density of sand:	1.395	Sand retained in cone (gm)=	395.4
FIELD DENSITY BY SAND REPLACEMENT METHOD			
SL.no	Particulars	S-1	S-2
1	Wt of soil from hole (w2) gm:	2415.6	2395.4
2	Wt of sand + cylinder before pouring(gm) (w3)	7180	7180
3	Wt of sand+ cylinder after pouring (gm)(w4)	5286.5	5306.3
4	Wt of sand in hole (gm)(w5= w3-w4-w1)	1498.1	1478.3
5	Volume of sand in hole (V = W5/Ysand)	1073.91	1059.71
6	Bulk density (gm/cc) (Yb= W2/v)	2.249	2.260
7	Moisture meter reading (%)	5.30	5.35
8	Dry density (g/cc) Yd = Yb /(1 + w/100)	2.152	2.153
9	Degree of compaction achieved, (%) (Yd/mdd)*100)	98.74	98.75
10	Required degree of compaction, (%) ,As per MORT&H 5th specification.	98.74	
Remarks: Found to be Satisfactory.			

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP Bangalore - 92



AARTN ASSOCIATES

The Modern Construction Solutions



#1059, MIG-A Sector, Opp. Railwheel Factory,
Yelahanka New Town, Bangalore - 64
Ph : 8048505503 | Email : aartnassociates@gmail.com

Test Report of Physical Properties of Cement-53 Grade

IS: 12269-2013, IS: 4031(Part-1,2,3,4,5,6,11)-1988

Date: 27-04-2021

Name of Work : Improvements to roads and drian at western side of hegdenagara 2nd main road from 1st cross to 7th cross and surrounding Areas in ward No.06

Client Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.

Contractor Sri. K S Chowdareddy

Customer Reference EE(Project)YNK Zone/WO/191/2020-21

Source of Sample Sample supplied by Agency

Sample Condition Satisfactory

Sample Type Birla Super 53-Grade

Date of Test 27-04-2021

Environmental Condition during test
Temperature: 26°C
Humidity: 72%

Test Results

Sl. No	Physical Properties	Result	Requirements as per IS: 12269-2013
1	Finess by dry sieving (%)	1.95	-
2	Finess by Air permiability method (m ² /kg, Min)	285.4	225 m ²
3	Density, (gm/cm)	3.12	-
4	Standard Consistency (%)	29.50%	Not Specified
5	Initial Setting time	145 Minutes	Not less than 30 minutes
6	Final Setting Time	240 Minutes	Not more than 15 minutes
7	Soudness (Le Chateliers Method)	1.5 mm	Not more than 10 mm

Remarks :

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92



AARTN ASSOCIATES

The Modern Construction Solutions



#1059, MIG-A Sector, Opp. Railwheel Factory,
Yelahanka New Town, Bangalore - 64
Ph : 8048505503 | Email : aartnassociates@gmail.com

Test Report of Physical Properties of Cement-53 Grade

IS: 12269-2013, IS: 4031(Part-4,6)-1988

Date:

27-04-2021

Name of Work : Improvements to roads and drian at western side of hegdenagara 2nd main road from 1st cross to 7th cross and surrounding Areas in ward No.06

Client Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.

Contractor Sri. K S Chowdareddy

Customer Reference EE(Project)YNK Zone/WO/191/2020-21

Source of Sample Sample supplied by Agency

Sample Condition Satisfactory

Sample Type Birla Super 53-Grade

Date of Test 27-04-2021

Environmental Condition during test
Temperature: 26°C
Humidity: 72%

Compressive Strength

Sl. No	Physical Properties	Result	Requirements as per IS: 12269-2013
1	3 Days	28.5 N/mm ²	Not less than 27 N/mm ²
2	7 Days	39.0 N/mm ²	Not less than 37 N/mm ²
3	28 Days	58.5 N/mm ²	Not less than 53 N/mm ²

Remarks :

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92



AARTN ASSOCIATES

The Modern Construction Solutions



#1059, MIG-A Sector, Opp. Railwheel Factory,

Yelahanka New Town, Bangalore - 64

Ph : 8048505503 | Email : aartnassociates@gmail.com

Test Report of Fine Aggregate

IS: 383-2016, IS: 2386 (Part-1, 3)-1963 (Reaffirmed-2012)

Date: 27-04-2021

Name of Work : Improvements to roads and drian at western side of hegdenagara 2nd main road from 1st cross to 7th cross and surrounding Areas in ward No.06

Client Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.

Contractor Sri. K S Chowdareddy

Customer Reference EE(Project)YNK Zone/WO/191/2020-21

Source of Sample Sample supplied by Agency

Sample Condition Satisfactory

Sample Type Fine Aggregate

Date of Test 27-04-2021

Total wt of the sample (gms):

1000

IS Sieve size (mm)	Weight retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specifcations as per IS: 383-2016			
					Grading Zone-1	Grading Zone-2	Grading Zone-3	Grading Zone-4
10	0	0	0.0	100	100	100	100	100
4.75	27	27	2.7	97.3	90-100	90-100	90-100	95-100
2.36	55	82	8.2	91.8	60-95	75-100	85-100	95-100
1.18	239	321	32.1	67.9	30-70	55-90	75-100	90100
600	205	526	52.6	47.4	15-34	35-59	60-79	80-100
300	203	729	72.9	27.1	5-20	8-30	12-40	15-50
150	191	920	92.0	8.0	0-10	0-10	0-10	0-15
PAN	80	1000	100.0	0.0	-	-	-	-

Result: The Tested Sample Conforms to Grading Zone-II

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92



AARTN ASSOCIATES

The Modern Construction Solutions



#1059, MIG-A Sector, Opp. Railwheel Factory,
Yelahanka New Town, Bangalore - 64
Ph : 8048505503 | Email : aartnassociates@gmail.com

Test Report of Fine Aggregate

IS: 383-2016, IS: 2386 (Part-1, 3)-1963 (Reaffirmed-2012)		Date:	27-04-2021
Name of Work : Improvements to roads and drian at western side of hegdenagara 2nd main road from 1st cross to 7th cross and surrounding Areas in ward No.06			
Client	Bruhat Bangalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.		
Contractor	Sri. K S Chowdareddy		
Customer Reference	EE(Project)YNK Zone/WO/191/2020-21		
Source of Sample	Sample supplied by Agency		
Sample Condition	Satisfactory		
Sample Type	Fine Aggregate		
Date of Test	27-04-2021		
Physical Properties			
Sl. No	Physical Properties	Result	Requirements as per IS: 386-2016
1	Water Absorption (%)	1.50	-
2	Specific Gravity	2.59	-
3	Material Finer tha 75 micron (%)	6.90	Uncrushed fine Aggregate Max 3% Crushed Fine Aggregate Max 15% Mixed Fine Aggregate Max 12% Manufacture Fine Aggregate Max 10%
Remarks :			


Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92



AARTN ASSOCIATES

The Modern Construction Solutions



#1059, MIG-A Sector, Opp. Railwheel Factory,

Yelahanka New Town, Bangalore - 64

Ph : 8048505503 | Email : aartnassociates@gmail.com

Test Report of Coarse Aggregate

IS: 383-2016, IS: 2386 (Part-1, 3 & 4)-1963 (Reaffirmed-2012)			Date:		29-04-2021
Name of Work : Improvements to roads and drian at western side of hegdenagara 2nd main road from 1st cross to 7th cross and surrounding Areas in ward No.06					
Client		Bruhat Bangalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.			
Contractor		Sri. K S Chowdareddy			
Customer Reference		EE(Project)YNK Zone/WO/191/2020-21			
Source of Sample		Sample supplied by Agency			
Sample Condition		Satisfactory			
Sample Type		Coarse Aggregate			
Date of Test		29-04-2021			
Sieve Analysis (Particle Size Distribution) of 20mm Down Coarse Aggregate					
Total wt of the sample (gms):			5000		
IS Sieve size (mm)	Weight retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specifcations as per IS: 383-2016
40	0	0	0.0	100	100
20	245	245	4.9	95.1	90-100
10	2560	2805	56.1	43.9	20-55
4.75	2033	4838	96.8	3.2	0-10
PAN	162	5000	100.0	0.0	-
Remarks :					

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

